

DETAILED ACTION

The response received on 5/12/2011 has been placed in the file and was considered by the examiner. An action on the merit follows.

Response to Amendment

1. The amendments filed on 2011 May 12 have been fully considered. Response to these amendments is provided below.

Summary of Amendment/ Arguments and Examiner's Response:

2. The applicant has amended new limitations in the claims and has argued that Abrahams does not disclose "comparing each data sets...wherein the user provided identifying information" and "determining whether the data sets....was provided".
3. The examiner disagrees. As seen in the rejection below, the amended limitations are still taught by the prior art. It is noted that claim 1 does not claim the full amendments as argued, in particular, the limitation of "wherein the user provided identifying information." However, Abrahams teaches the claimed limitations, wherein the identifying information can be interpreted as fingerprints, (fig. 5, step 356), and the comparing is disclosed in fig. 5, step 362. The limitation of determining is disclosed in col. 6, lines 5-10, as previously indicated. Therefore, the rejection follows below.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 6, 7, 11, 14, and 18 are rejected under 35 U.S.C. 102(e) as being unpatentable by U.S. Patent 6944773 (Abrahams).
6. Regarding claim 7, Abrahams discloses an apparatus for authenticating a user (fig. 1), the apparatus comprising a fingerprint sensor operable to sensing only one fingerprint at a time (fig. 1, items 122, 126, 130), a database (fig. 1, item 106) and a processor (fig. 1, item 104, 108, 110, 112) adapted to perform the steps of: a. receiving information identifying a user, i.e. fingerprints (fig. 5, s356), the authentication information (fig. 5, item 366, or any of the identifying data that is registered in fig. 2; b) obtaining from a biometric contact sensor (col. 3, lines 30-35) a data set of biometric contact characteristics for each of a plurality of body parts, the images obtained being the data set, for each of the plurality of body parts (fig. 5, step 356); c. comparing each data set with authentic versions, corresponding fingerprints on file, (fig. 5, step 362) stored in a database (fig. 1 item 106) to determine whether each data set of biometric contact characteristics belongs to the user whose information was received (fig. 5, step 362); d. determining whether each of the plurality of parts of the user's body are placed on the biometric contact sensor at a sensing position within a predetermined period of time of one another, by finding if each successive fingerprint is placed within the time-out period (col. 6, lines 4-14) when it is determined that each data set of biometric contact characteristics belongs to the user for which information was received, during authentication procedure of fig. 5; e. determining whether the plurality of parts of the user's body were placed on the biometric contact sensor at the sensing position in a sequence when it is determined that the plurality of parts of the user's body are placed

within the predetermined period of time of one another (col. 6, lines 4-14), since it is determined that the parts were placed in a sequence because if the parts weren't, then it is determined that they are not placed in a full sequence by timing out (col. 6, lines 4-14), and if they were, the parts are determined to be entered in the sequence by continuing to the comparison of fig. 5, step 362. Abrahams further discloses the sequence randomly changes after each authentication of the identity of the user, since the fingerprint is chosen by random at each authentication (fig. 5, step 354); and f. issuing an authentication signal when it is determined that the plurality of parts of the user's body are placed on the biometric contact sensor at the sensing position in the sequence (fig. 5, step 366).

7. Claims 1 and 18 are rejected for the same reasons as claim 7. Thus, the arguments analogous to that presented above for claim 7 are equally applicable to claims 1 and 18. Claims 1 and 18 distinguishes from claim 7 only in that claim 1 is a method claim, claim 18 is a computer product claim with a computer readable medium and claim 7 is an apparatus. Since an apparatus carries out a method, and since Abrahams discloses a computer program products comprising a non-transitory computer readable medium and computer program instruction (fig. 1) performing the method, prior art applies.

8. Regarding claim 2, Abrahams discloses the body parts are the user's fingertips, since fingerprints are obtained from fingertips (fig. 5, step 354) and the biometric contact sensor is a fingerprint sensor (col. 3, lines 30-35).

9. Regarding claim 6, Abrahams discloses that the data sets are compared with the authentic versions using a correlation based algorithm since the fingerprints are correlated in the algorithm carried out in fig. 4, step 362.

10. Regarding claim 11, Abrahams discloses the apparatus further comprises a data input device (fig. 1, keyboards or any other input device shown in fig. 1).

11. Regarding claim 14, Abrahams discloses a method (fig. 5) of authenticating the identity of a user, the method comprising: a. obtaining a sequence of data sets/ images of biometric characteristics/ fingerprints of the user, the sequence provided in the process loop of fig. 5, steps 352-360 each data set relating to one of a plurality of parts of the user's body, a finger (fig. 5, step 354); b. comparing each data set off biometric contact characteristics with authentic versions stored in a database to determine whether each data set of biometric contact characteristics belongs to the user (fig. 5, step 362), wherein the user provided identifying information, i.e. fingerprints (fig. 5, s356), the authentication information (fig. 5, item 366, or any of the identifying data that is registered in fig. 2; c. monitoring the order in which the sequence of data sets was obtained by monitoring the amount of inputs and monitoring the user's input of the fingerprint (fig. 5, step 352 and 354); d. determining whether the data sets are obtained within a predetermined period of time of one another by determining that each data set input is obtained within a time-out period (col. 6, lines 5-10) when it is determined that each data set of biometric contact characteristics belongs to the user for which identifying information was provided since, the whole process of fig. 5, is carried out during authentication; e. determining whether the sequence of data sets are in a

specified order when it is determined that the data sets are obtained within the predetermined period of time of one another by determining that the inputs have been entered before time-out and thus the specified order has been input by the user (col. 6, lines 5-10), wherein the specified order changes after each authentication of the identity of the user since the fingerprints are chosen at random each time the authentication occurs (fig. 5, step 354); and f. issuing an authentication signal when it is determined that the sequence of the data sets are in the specified order (fig. 5, step 355, 364).

12. Regarding claim 15, Abrahams discloses at least one of the plurality of parts of the user's body is a fingertip, since fingerprints come from fingertips (fig. 5, step 354).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 5, 8, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams in view of U.S. Patent No 6393139 (Lin et al).

15. Regarding claim 5, Abrahams discloses all of the claimed elements as set forth above and incorporated herein by reference. Abrahams does not disclose expressly that the data sets are compared with the authentic versions using a minutiae based algorithm.

Lin et al discloses data sets are compared with the authentic versions using a minutiae based algorithm (col. 6, line 23).

Abrahams and Lin et al are combinable because they are from the same field of endeavor, i.e. fingerprint authentication.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a minutiae based algorithm.

The suggestion/motivation for doing so would have been to provide a simple, well known and easy way to match fingerprints, and thus create a more robust method.

Therefore, it would have been obvious to combine the method of Abrahams with the minutia matching of Lin et al to obtain the invention as specified in claim 5.

16. Regarding claim 8, Lin et al discloses that many fingerprint sensors are capacitive sensors (col. 1, lines 35-43).

17. Regarding claim 9, Lin et al discloses that many fingerprint sensors are optical sensors (col. 1, line 19).

18. Regarding claim 17, Lin et al discloses in a multiple input device, at least one of the plurality of parts of the user's body is the user's face (col. 5, lines 28-31).

19. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams, as applied to claim 7 above, and further in view of U.S. Patent No. 5864296 (Upton).

Abrahams discloses all of the claimed elements as set forth above and incorporated herein by reference.

Abrahams does not disclose expressly the fingerprint sensor is a thermal sensor.

Upton discloses that many fingerprint sensors are thermal (col. 1, lines 35-36).

Abrahams and Upton are combinable because they are from the same field of endeavor, i.e. fingerprint recognition.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a thermal sensor.

The suggestion/motivation for doing so would have been to provide a more flexible system by providing a different ways of sensing the fingerprint, such as imaging fingerprints in the dark.

Therefore, it would have been obvious to combine the apparatus of Abrahams with the thermal sensor of Upton to obtain the invention as specified in claim 10.

20. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams, as applied to claim 11 above, and further in view of U.S. Patent No. 5594806 (Colbert).

Regarding claim 12, Abrahams discloses all of the claimed elements as set forth above and incorporated herein by reference.

Abrahams does not disclose expressly the data input device is a keypad.

Colbert discloses a data input device is a keypad (col. 6, line 58).

Abrahams and Colbert are combinable because they are from the same field of endeavor, i.e. verification systems.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide an input keypad.

The suggestion/motivation for doing so would have been to provide a more accurate/user-friendly system by allowing the user to access data and indicated information by providing a simple means to indicate the user's preferences.

Therefore, it would have been obvious to combine the apparatus of Abrahams with the keypad of Colbert to obtain the invention as specified in claim 12.

21. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams in view of U.S. Patent Application Publication No. 20030026462 (Chung et al).

Regarding claim 13, Abrahams discloses all of the claimed elements as set forth above and incorporated herein by reference.

Abrahams does not disclose expressly that one a data input device is a smart card reader.

Regarding claim 13, Chung et al discloses that the data input device is a smart card reader (page 7, paragraph 70).

Abrahams and Chung et al are combinable because they are from the same field of endeavor, i.e. authentication.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have a smart card reader.

The suggestion/motivation for doing so would have been to provide a more flexible, robust apparatus by allowing several different functionalities/ inputs of the

apparatus, and to allow a faster system by storing information on a smart card instead of the system.

Therefore, it would have been obvious to combine the apparatus of Abrahams with the smart card reader of Chung et al to obtain the invention as specified in claim 13.

22. Regarding claim 16, Chung et al discloses that one of the parts of the body that can be used as a biometric characteristic in a multiple input arrangement is the retina (page 3, paragraph 33.)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHLEEN Y. DULANEY whose telephone number is (571)272-2902. The examiner can normally be reached on Monday to Thursdays, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571)272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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5/23/2011